STEREO FULL AUTOMATIC TURNTABLE SYSTEM

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SERVICE MANUAL

KENWOOD

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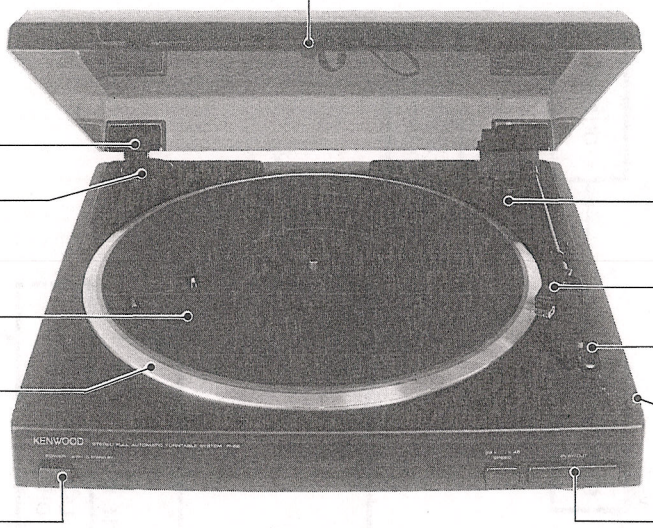
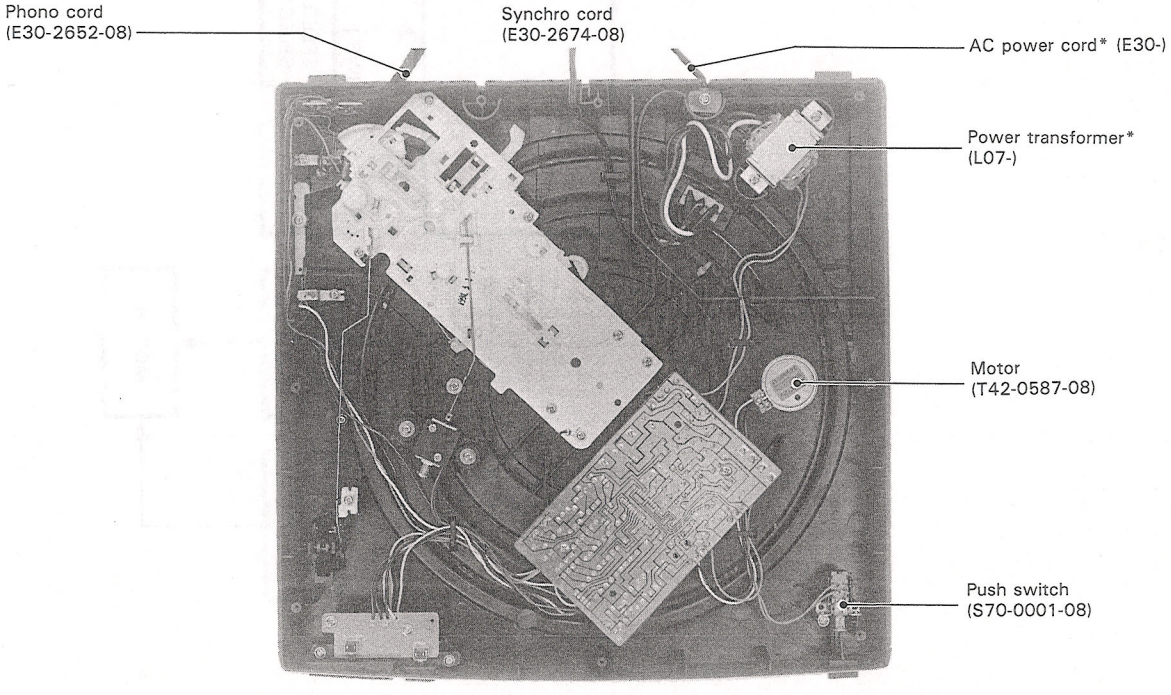
B51-4358-00(T) 1816





* Refer to parts list on page 10.

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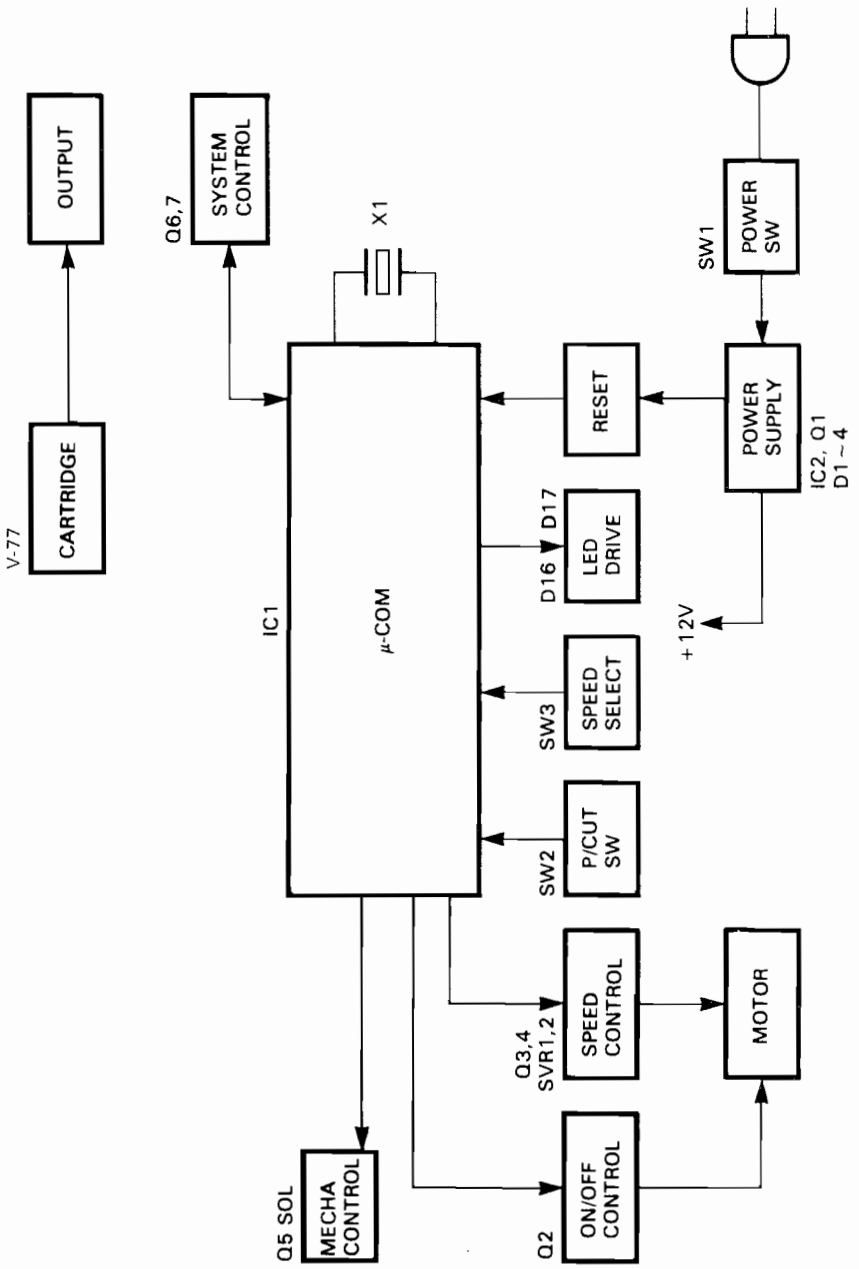


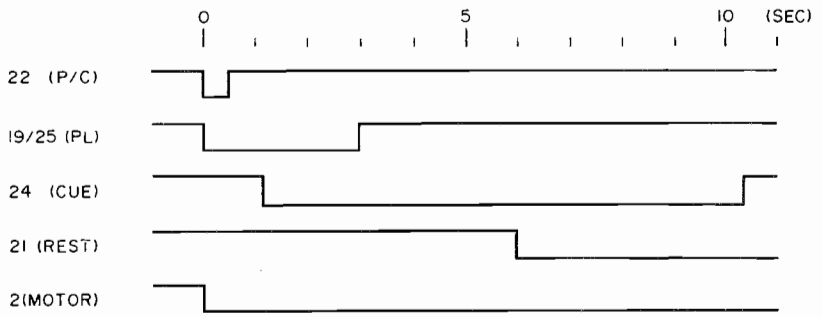
CIRCUIT DESCRIPTION

EXPLANATION of TERMINALS (LM6416F-2267)

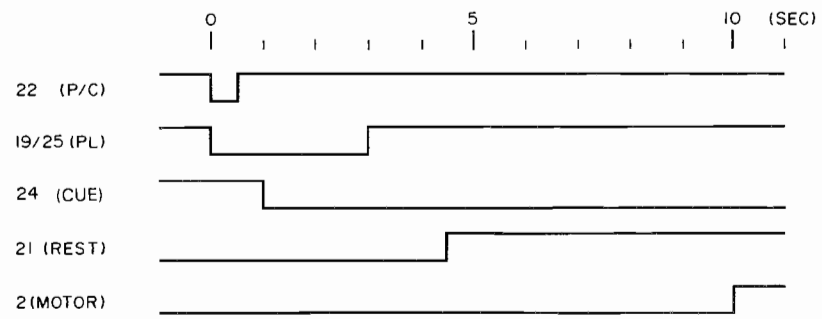
PIN NO	PORT NAME	I/O	FUNCTION DESCRIPTION		REMARKS
1	M.SPEED	O	33/45 CONTROL	H:33 L:45	
2	$\overline{\text{M.CONT.}}$	O	MOTOR ON/OFF	H:OFF L:ON	
3	BUSY IN	I	SYSTEM CONTROL INPUT		
4	DATA IN	I	SYSTEM CONTROL INPUT		
5	EX	I	CLOCK		
6	X	O	CLOCK		
7	SPEED	I	SPEED CONTROL		
8	RST	I	RESET		
11	$\overline{\text{45 LED}}$	O	45 LED CONTROL	H:OFF L:ON	
12	$\overline{\text{33 LED}}$	O	33 LED CONTROL	H:OFF L:ON	
14	Vss	—	GND		
19	$\overline{\text{PL 1}}$	O	PLUNGER CONTROL	H:OFF L:ON	
20	VDD	I	+5V		
21	$\overline{\text{REST.}}$	I	REST SW (SW5)	H:OFF L:ON	
22	$\overline{\text{P/C}}$	I	PLAY/CUT (SW2)	H:OFF L:ON	
23	—	—	—		
24	$\overline{\text{CUE}}$	I	CUE (SW4)	H:OFF L:ON	
25	$\overline{\text{PL2}}$	O	PLUNGER CONTROL	H:OFF L:ON	
26	—	—	—		
27	BUSY OUT	O	SYSTEM CONTROL OUTPUT		
28	DATA OUT	O	SYSTEM CONTROL OUTPUT		

TIMMING CHART

STOP → PLAY



PLAY → STOP



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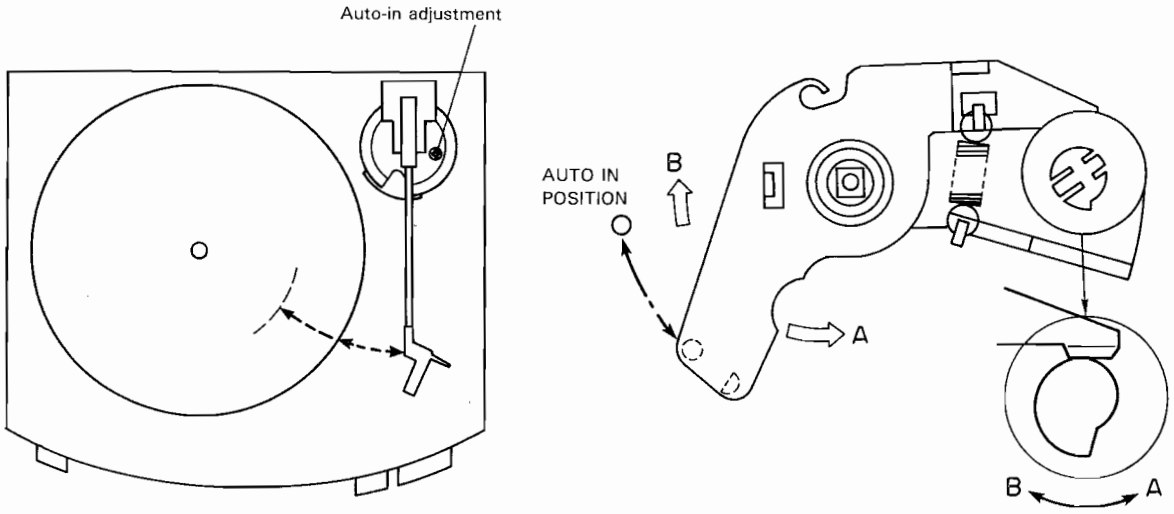
ADJUSTMENT

1. Auto-in adjustment

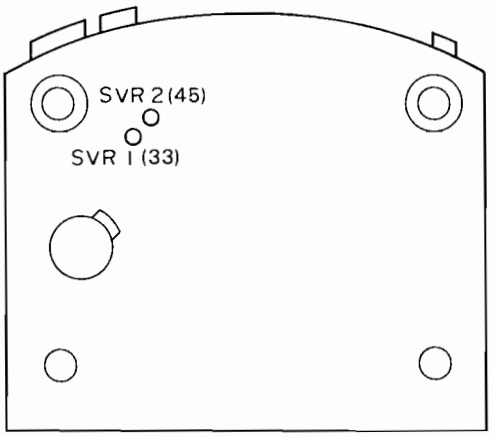
Turn the auto-in adjustment eccentric pin to adjust the traveling distance of the tonearm when it is automatically led in.



A: The auto in position shifts inwards
B: The auto in position shifts outwards

2. Speed adjustments

Turn SVR1 (33 RPM) and SVR2 (45 RPM) to adjust.
At first, perform the 33 RPM adjustment by SVR1, then the 45 RPM adjustment by SVR2.



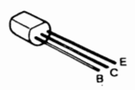
GND LINE
+B LINE

IC1 : LM6416F-2267
IC2 : DBL7812

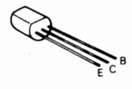
Q1 : 2SC2235Y
Q2,5 : 2SA965Y
Q3 : 2SK30A
Q4 : 2SC1815Y
Q6,7 : 2SA1015Y

D1~5,9 : 1N4001
D6,10~15 : 1N4148
D8 : RD5.6EB2
D16,17 : DL-ILR

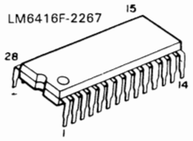
2SA1015Y
2SA965Y



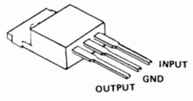
2SC1815Y
2SC2235Y



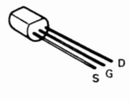
LM6416F-2267



DBL7812



2SK30A



DC voltages are as measured with a high impedance voltmeter at 33-1/3 r.p.m. mode. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance, près de 33-1/3 r.p.m. en mode du lecture. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments du mesure individuels.

Die angegeben Gleichspannungswerte wurden bei 33-1/3 r.p.m. in der Wiedergabe mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von unterschieden zwischen einzelnen Instrumenten oder Geräten u.U. geringfügig.

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

Y21-3262-71

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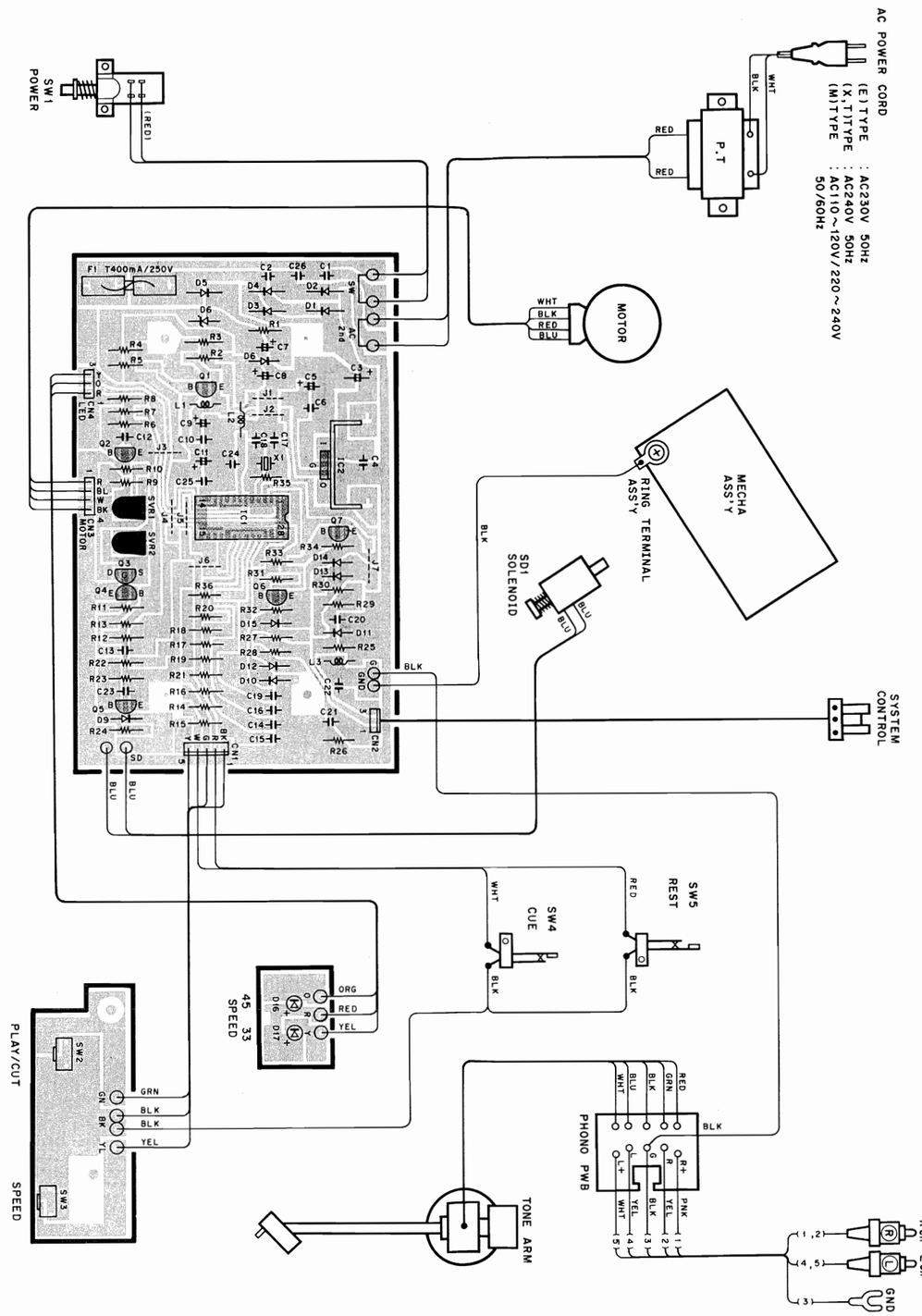
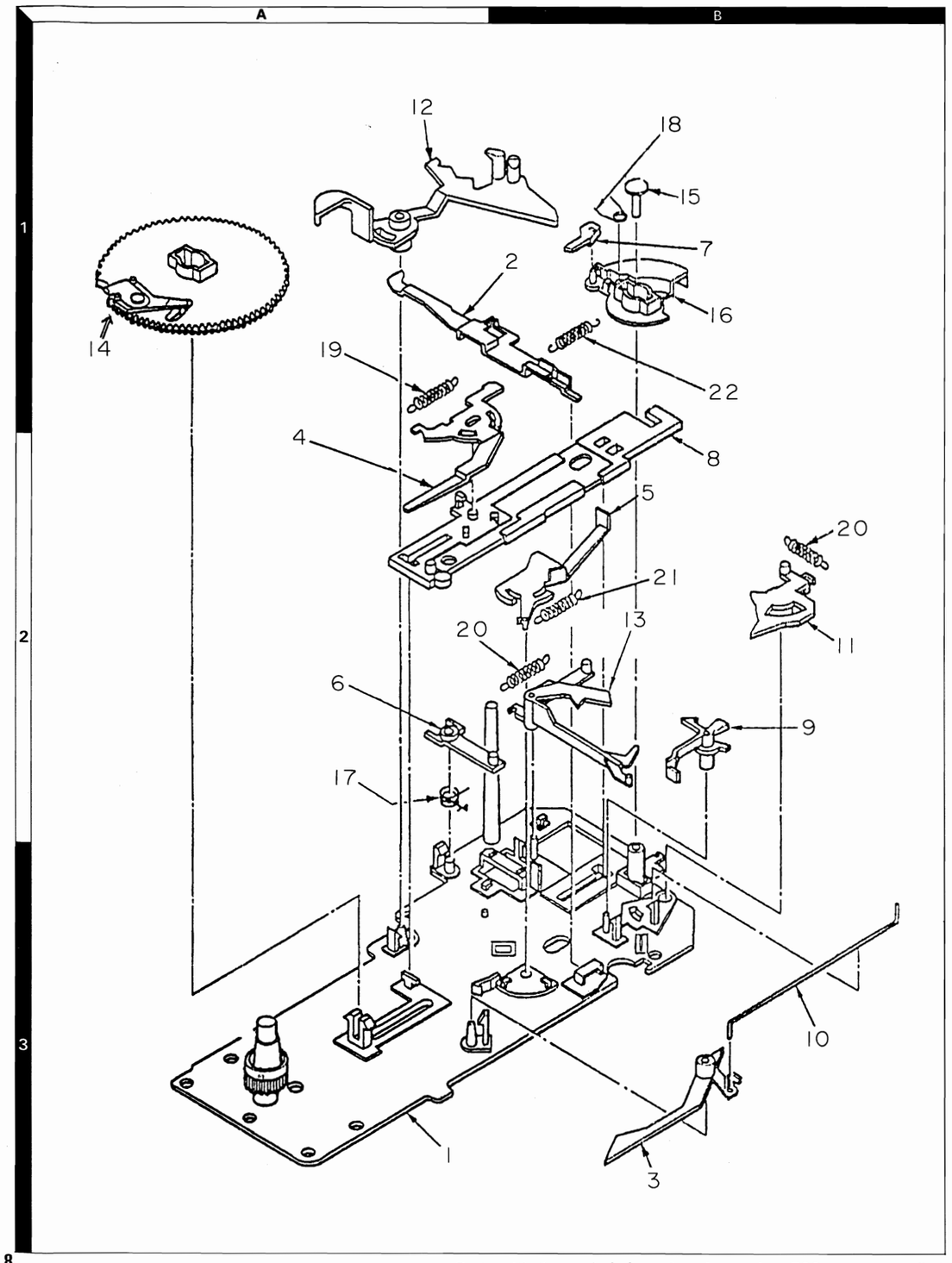
PC BOARD (Component side view)

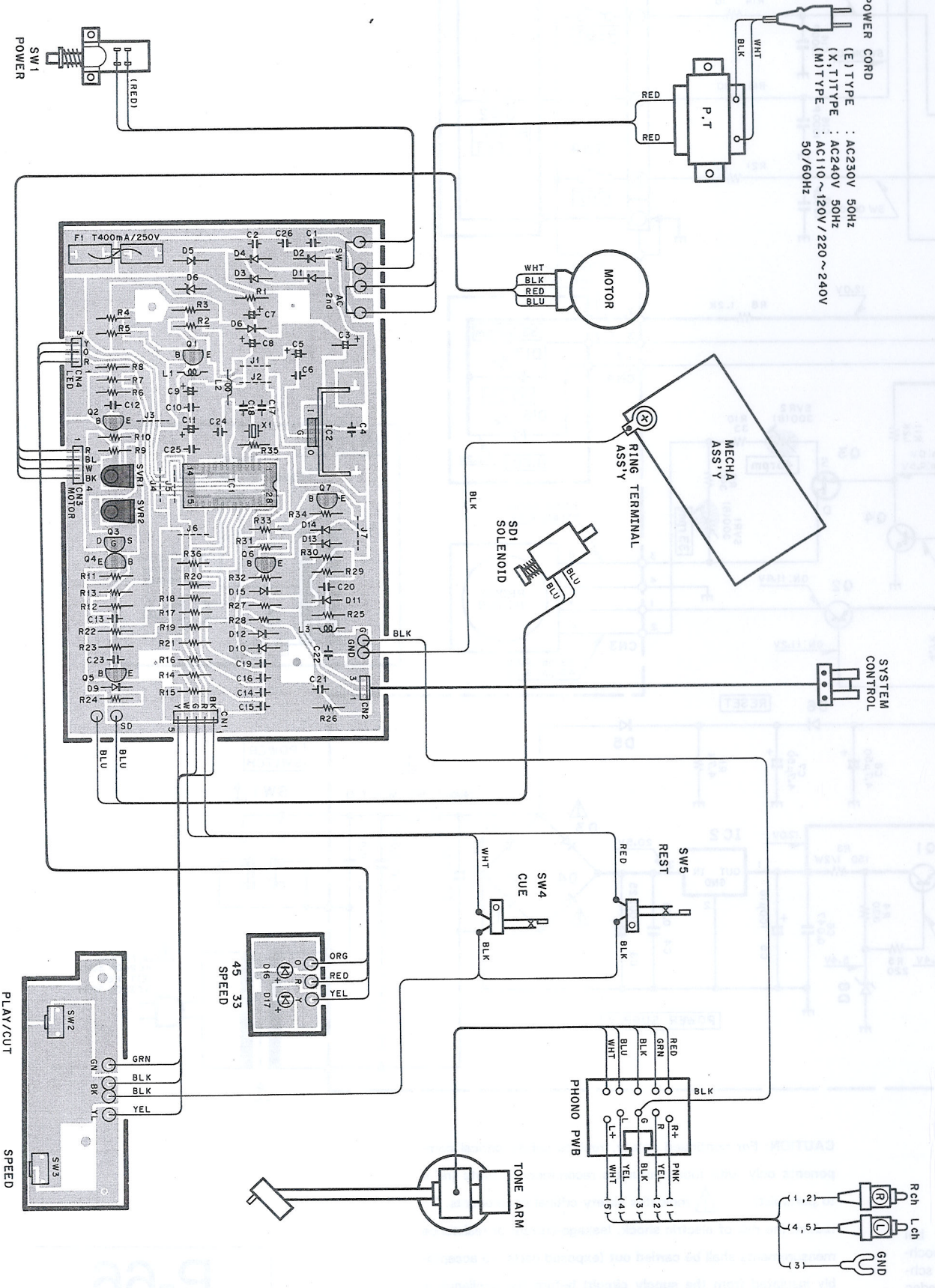


EXPLODED VIEW (MECHANISM)

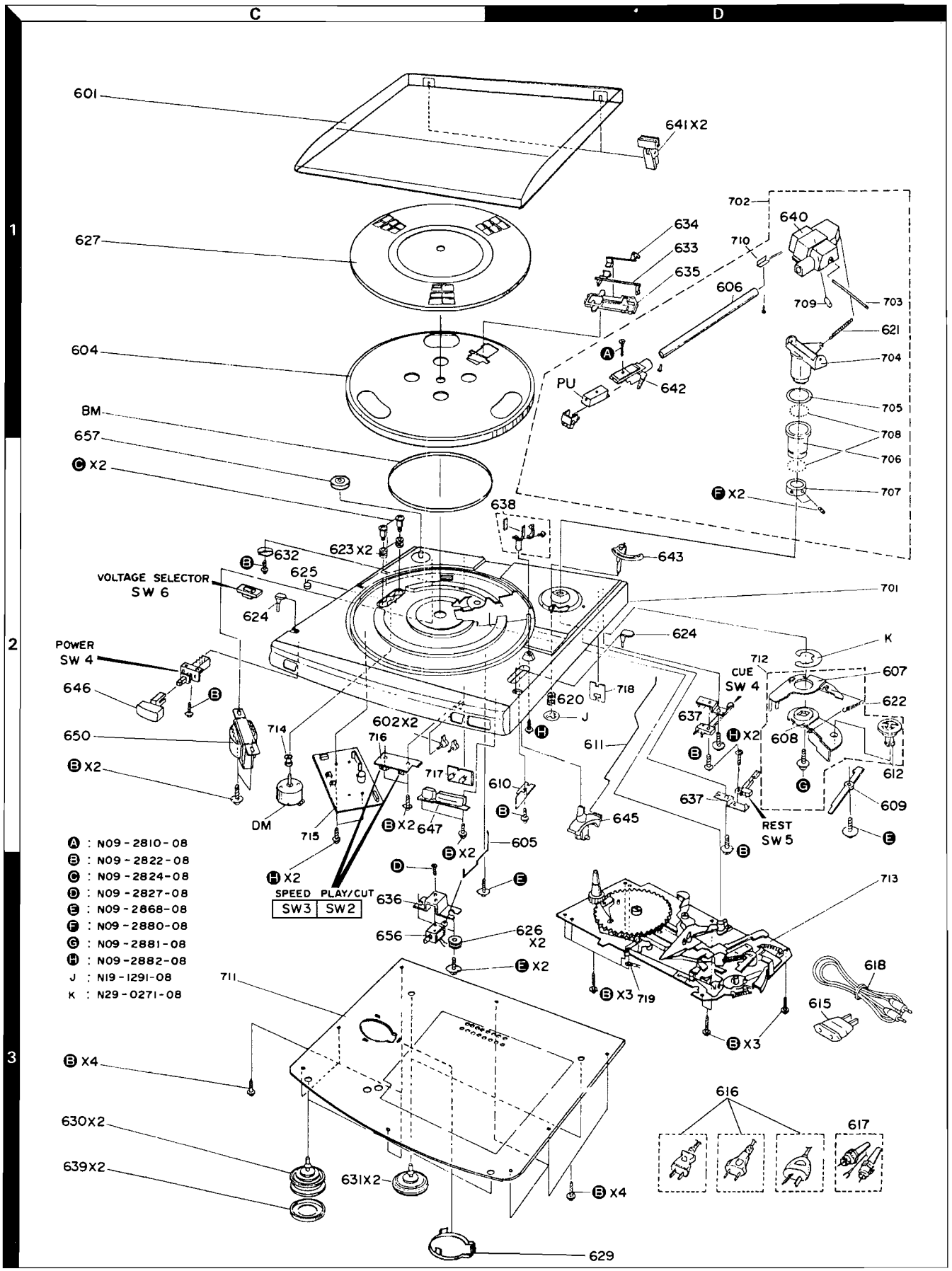


Parts with the exploded numbers larger than 700 are not supplied.

PC BOARD (Component side view)



EXPLODED VIEW (UNIT)



Parts with the exploded numbers larger than 700 are not supplied.

PARTS LIST

* New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnes dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
			P-66			
601	1C	*	A53-1323-08	DUST COVER		
602	2C	*	B12-0188-08	INDICATION LED		
-			B46-0096-23	WARRANTY CARD	X	
-			B46-0122-13	WARRANTY CARD	E	
-			B46-0143-13	WARRANTY CARD	T	
-		*	B60-0624-08	INSTRUCTION MANUAL(E,F,S,C)	M	
-		*	B60-0625-08	INSTRUCTION MANUAL(ENGLISH)	TX	
-		*	B60-0626-08	INSTRUCTION MANUAL(E,F,G,I,D)	E	
604	1C		D02-0105-08	PLATTER		
605	2D	*	D10-3226-08	LINK(PLAY/CUT)		
606	1D	*	D10-3227-08	PIPE(ARM)		
607	2D	*	D10-3228-08	FEED ARM(A)		
608	2D	*	D10-3229-08	FEED ARM(B)		
609	2D	*	D10-3237-08	LEVER(PLAY/CUT)		
610	2D	*	D10-3239-08	BLANKET(CUEING LEVER)		
611	2D	*	D10-3240-08	LINK(CUE)		
612	2D	*	D12-0135-08	PITCH ADJUST		
BM	1C	*	D02-0318-08	BELT (DRIVING)		
⚠ 615	3D		E03-0115-05	AC PLUG ADAPTOR	M	
⚠ 616	3D		E30-2596-05	AC POWER CORD	T	
⚠ 616	3D		E30-2646-08	AC POWER CORD	X	
⚠ 616	3D		E30-2647-08	AC POWER CORD	ME	
617	3D		E30-2652-08	PHONO CORD		
618	3D	*	E30-2674-08	SYNCHRO CORD		
620	2D		G01-3358-08	SPRING(ELEVATION)		
621	1D	*	G01-3444-08	SPRING(WEIGHT)		
622	2D	*	G01-3445-08	SPRING(FEED ARM)		
623	2C		G11-2058-08	CUSHION(MOTOR)		
624	2C,2D		G11-2059-08	CUSHION(DUST COVER)		
625	2C		G11-2063-08	CUSHION(MOTOR A)		
626	3D		G11-2064-08	CUSHION(RUBBER A)		
627	1C		G16-0776-08	RUBBER SHEET		
-		*	H10-5234-08	POLYSTYRENE FOAMED FIXTURE		
-			H25-0232-04	PROTECTION BAG(MANUAL)		
-			H25-0641-08	PROTECTION BAG(SET)		
-			H25-0645-08	PROTECTION BAG(PLATTER)		
-		*	H50-0162-08	ITEM CARTON CASE		
629	3C	*	J19-3451-08	BLANKET(MOTOR)		
630	3C	*	J02-1070-08	FOOT(FRONT)		
631	2C	*	J02-1071-08	FOOT(REAR)		
632	2C		J19-3414-08	STOPPER(AC POWER CORD)		
633	1D		J19-3420-08	SENSOR(B)		
634	1D		J19-3421-08	SENSOR(A)		
635	1D		J19-3422-08	HOLDER(SENSOR)		
636	3C		J19-3423-08	HOUSING(SOLENOID)		
637	2D		J19-3424-08	BLANKET(LEAF SWITCH)		
638	2D	*	J19-3449-08	ARM STAND ASSY		
639	2C	*	J19-3450-08	HOUSING(FOOT)		
640	1D	*	J19-3452-08	HOLDER(PIPE)		
641	1D		J50-0135-08	HINGE ASSY		
642	1D	*	J92-0100-08	HEAD SHELL		

L:Scandinavia **K:**USA **P:**Canada
Y:PX(Far East, Hawaii) **T:**England **E:**Europe
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⚠ indicates safety critical components.

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	643	2D	*	J99-0509-08	ARM ELEVATION		
	645	2D	*	K27-2037-08	LEVER(CUE)		
	646	2C	*	K27-2039-08	KNOB(POWER)		
	647	2C	*	K29-4333-08	KNOB(SPEED,PLAY/CUT)		
⚠	650	2C		L07-0339-08	POWER TRANSFORMER	E	
⚠	650	2C		L07-0340-08	POWER TRANSFORMER	XT	
⚠	650	2C		L07-0341-08	POWER TRANSFORMER	M	
	A		*	N09-2810-08	SCREW FH		
	B			N09-2822-08	SCREW TAP WPH		
	C			N09-2824-08	SCREW(MOTOR SETTING)		
	D			N09-2827-08	SCREW PH		
	E		*	N09-2868-08	WASHER SCREW TP		
	F		*	N09-2880-08	SETTING SCREW		
	G		*	N09-2881-08	SCREW		
	H		*	N09-2882-08	SCREW		
	J		*	N19-1291-08	WASHER CS		
	K		*	N29-0271-08	E-RING		
⚠	SW1	2C		S70-0001-08	PUSH SWITCH(POWER)		
	SW4 ,5	2D		S74-0003-08	LEAF SWITCH(CUE,REST)		
⚠	SW6	2C		S62-0004-08	SWITCH(VOLTAGE SELECTOR)	M	
	PU	1D	*	T21-0159-08	CARTRIDGE(V-77)		
	656	3C		T94-0222-08	SOLENOID		
	DM	2C		T42-0587-08	MOTOR		
	657	2C		W01-0329-04	EP ADAPTOR		
	ELECTRIC UNIT						
	D16 ,17			DL-1LR	LED		
	C1 ,2			CK45FF1H103J	CERAMIC 0.010UF J		
	C3			CE04KW1E102J	ELECTRO 1000UF 25WV		
	C4			CK45FF1H103J	CERAMIC 0.010UF J		
	C5			CE04KW1C101J	ELECTRO 100UF 16WV		
	C6			CK45FF1H473J	CERAMIC 0.047UF J		
	C7 ,8			CE04KW1H4R7J	ELECTRO 4.7UF 50WV		
	C9			CE04KW1A470J	ELECTRO 47UF 10WV		
	C10			CK45FF1H473J	CERAMIC 0.047UF J		
	C11			CE04KW1A471J	ELECTRO 470UF 10WV		
	C12			CK45FF1H103J	CERAMIC 0.010UF J		
	C13 -16			CK45FF1H102J	CERAMIC 1000PF J		
	C17 ,18			CK45FF1H221J	CERAMIC 220PF J		
	C19			CK45FF1H102J	CERAMIC 1000PF J		
	C20			CK45FF1H221J	CERAMIC 220PF J		
	C21			CK45FF1H102J	CERAMIC 1000PF J		
	C22 -25			CK45FF1H103J	CERAMIC 0.010UF J		
	C26			CK45FF1H473J	CERAMIC 0.047UF J		
	-			J13-0078-08	FUSE CLIP		
⚠	F1			F50-0010-08	FUSE(250V TO.4A)		
	L1			L90-0023-08	SMALL FIXED INDUCTOR(100UH)		
	L2			L90-0024-08	SMALL FIXED INDUCTOR(47UH)		
	L3			L90-0023-08	SMALL FIXED INDUCTOR(100UH)		
	X1			L78-0283-08	CRYSTAL RESONATOR		
	R3			RD14BB2H151J	RD 150 J 1/2W		

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SVR1,2			R12-0119-08	SEMI FIXED (3000HM B)		
SW2 ,3	3C		S70-0002-08	TACT SWITCH(PLAY/CUT,SPEED)		
⚠ D1 -5			1N4001	DIODE		
D6			1N4148	DIODE		
D8			RD5.6EB2	ZENER DIODE		
D9			1N4001	DIODE		
D10 -15			1N4148	DIODE		
IC1		*	LM6416F-2267	IC(MICROPROCESSOR)		
IC2			DBL7812	IC(VOLTAGE REGULATOR/+12V)		
Q1			2SC2235Y	TRANSISTOR		
Q2 ,5			2SA965Y	TRANSISTOR		
Q3			2SK30A	FET		
Q4			2SC1815Y	TRANSISTOR		
Q6 ,7			2SA1015Y	TRANSISTOR		
MECHANISM ASS'Y						
1	3A	*	A10-2925-08	PLATE(UNIT OS)		
2	1B		D10-3147-08	LEVER(S/W)		
3	3B		D10-3148-08	LEVER(RETURN)		
4	2A		D10-3149-08	LEVER(START)		
5	2B		D10-3150-08	LEVER(DISTINCTION)		
6	2A		D10-3151-08	LEVER(SET)		
7	1B		D10-3152-08	LEVER(MOVING)		
8	2B	*	D10-3230-08	PLATE(CYCLE OS)		
9	2B	*	D10-3231-08	LEVER(MANUAL)		
10	3B	*	D10-3232-08	LINK SLIDE		
11	2B	*	D12-0136-08	CAM(CUEING)		
12	1A	*	D12-0137-08	CAM(AUTO SIZE)		
13	2B	*	D12-0138-08	CAM(AUTO IN)		
14	1A		D13-0933-08	RING GEAR ASSY		
15	1B		D19-0265-08	LOCKER(CAM MOVING)		
16	1B	*	D19-0271-08	CAM(FEED ARM)		
17	2A		G01-3368-08	SPRING(SET)		
18	1B		G01-3369-08	SPRING(MOVING)		
19	1A		G01-3370-08	SPRING(STR)		
20	2A,2B		G01-3371-08	SPRING(AU)		
21	2B		G01-3372-08	SPRING(SCC)		
22	1B		G01-3373-08	SPRING(S/W)		

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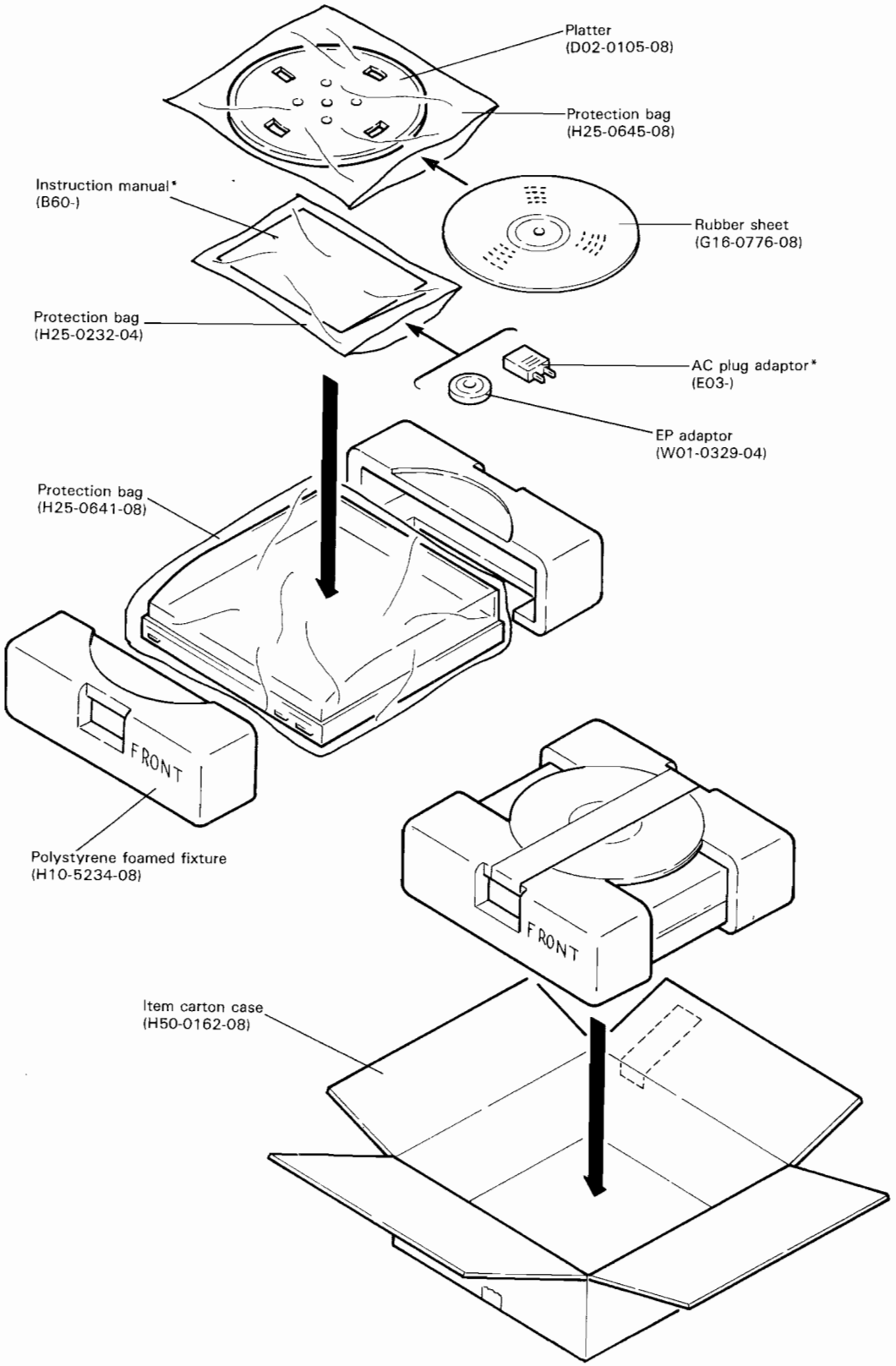
PACKING



*Refer to parts list on page 10.

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SPECIFICATIONS

Motor and Turntable

Drive System.....Belt-drive system
Motor.....DC Servo Motor
Turntable Platter.....30.1 cm (11-7/8″) diameter
0.31 kg (0.68 lb) weight
Speeds.....2 speeds, 33-1/3 and 45 rpm
Wow & Flutter.....0.05% (WRMS)
S/N (Rumble).....DIN: 68 dB (Weighted)

Tonearm

Type.....Static-Balanced Straight Tonearm
Effective Tonearm Length..205 mm
Overhang.....16 mm

Cartridge

Furnished Cartridge.....MM cartridge (V-77)
Frequency Response.....20 ~ 20,000 Hz
Output Voltage.....2.5 mV
(1,000 Hz, 5 cm/sec)
Load Impedance.....47 kΩ
Stylus.....N-77 with 0.6 mil diamond
Optimum Tracking Force...2.5 grams
Compliance.....4×10^{-6} cm/dyne

Miscellaneous

Power Consumption.....6 W
Dimensions.....W: 360 mm
H: 102 mm
With Dust Cover
88.5 mm
Without Dust Cover
D: 364 mm
With Dust Cover
360 mm
Without Dust Cover
Weight (Net).....3.2 kg

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

KENWOOD poursuit une politique de progrès constants en ce qui concerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

KENWOOD strebt ständige, Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.

Note:
Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the Europe (E) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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